National Aeronautics and
Space Administration

Principal Center for Regulatory Risk Analysis and Communication

REGULATORY SUMMARY

Effluent Limitations Guidelines and Standards for the Construction and Development Point Source Category

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Introduction

On 1 December 2009, the U.S. Environmental Protection Agency (EPA) issued the final rule establishing Effluent Limitation Guidelines (ELG) and New Source Performance Standards (NSPS) for the Construction and Development (C&D) point source category. These regulations are intended to strengthen the existing national storm water regulatory program and to reduce the amount of sediment and other pollutants discharged from construction sites. The proposed rule was published in the *Federal Register* (FR) on 28 November 2008 (73 FR 72561). The final rule becomes effective 60 days after the 1 December 2009 (74 FR 62996) publication date. Additional information about the final rule is available on EPA's website.

Background

Improper control of storm water discharges from construction activity is among the many contributors of sediment, which is a water quality issue throughout the United States. Sediment is the leading cause of water quality impairment and wetland degradation. If not managed properly, disturbed soil from clearing, excavating, and grading activities can be easily washed offsite during storm events, potentially resulting in physical, chemical, and biological impacts to receiving waters. Likewise, other pollutants preferentially adhere to mineral or organic particles in fine sediment and these pollutants can cause additional impairments to receiving waters.

In the *Code of Federal Regulations* (CFR), the existing national storm water regulations (40 CFR 122.26) require permittees to implement control measures to manage discharges associated with construction activity. The current regulations require permit coverage for construction activities that disturb 1 or more acres of land, or that disturb less than 1 acre of land but are part of a larger common plan of development whose total land disturbance is 1 acre or greater. The permit coverage may include ELGs, which are technology-based effluent limitations required by the Clean Water Act (CWA), Sections 301 and 306, for categories or subcategories of point source dischargers. The limitations may be numeric or non-numeric in nature and are incorporated, where appropriate, into National Pollutant Discharge Elimination System (NPDES) permits. They are based on the level of control achievable through various levels of pollutant control technologies.

ELGs for the C&D point source category were proposed in June 2002; however, they were never finalized and ultimately were withdrawn in April 2004 as a result of the inability to administer

the program cost-effectively at that time. On 1 December 2006, a U.S. District Court finalized a ruling that requires EPA to promulgate ELGs for the C&D point source category no later than December 2009 and to meet established interim milestones. On 1 December 2009, EPA published the final rule in the FR.

Summary of Final Rule

The final rule establishes nationwide technology-based minimum requirements for the reduction of sediment, turbidity, total suspended solids (TSS), and other pollutants in storm water discharges from C&D sites. The requirements will be met through the use of varying degrees of technology for conventional, toxic, and nonconventional pollutants. The final rule amends Title 40 of the CFR to add a new Part 450–Construction and Development Point Source Category. These regulations specify minimum requirements for the control of erosion, sedimentation, and pollutant discharge from C&D sites. The regulations apply to C&D sites through incorporation in individual NPDES permits or general permits issued by the NPDES permitting authority. Effluent limitations for pollutants not covered by this regulation also may be established by the NPDES permitting authority, if necessary, based on state water quality standards or other provisions. The implementation date of the new requirements will vary depending on when states reissue their construction general permits and whether projects are covered by individual or general permits. Details of the regulations are provided in the following sections.

Best Practicable Control Technology (BPT)

Under the CWA, EPA is required to specify BPT effluent limits for conventional, toxic, and nonconventional pollutants by evaluating the level of control that is technologically available and economically practicable. These guidelines are based on the average of the best performing facilities within a category.

Erosion and Sediment Control Limitations (BPT)

Construction sites subject to the rule will be required to provide and maintain effective erosion controls in accordance with established industry practices. These controls must be implemented on disturbed areas of the construction site to minimize the discharge of sediment and other pollutants. Erosion controls implemented at the site must, at a minimum, be designed and installed to:

- Control storm water volume and velocity within the site to minimize soil erosion.
- Control storm water discharges, including both peak flow rates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion.
- Minimize the amount of soil exposed during construction activity.
- Minimize the disturbance of steep slopes.
- Minimize sediment discharges from the site. The design, installation, and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation; the nature of resulting storm water runoff; and soil characteristics, including the range of soil particle sizes expected to be present on the site.

- Provide and maintain natural buffers around surface waters and direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration, unless infeasible.
- Minimize soil compaction and, unless infeasible, preserve topsoil.

Soil Stabilization (BPT)

Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating, or other earth-disturbing activities have ceased permanently on any portion of the site, or ceased temporarily on any portion of the site and will not resume for a period exceeding 14 calendar days. Stabilization must be completed within a period of time determined by the permitting authority. As specified by the permitting agency, alternative stabilization measures must be employed in arid, semiarid, and drought-stricken areas in which initiating vegetative stabilization measures immediately is infeasible.

Dewatering (BPT)

Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.

Pollution Prevention Measures (BPT)

At a minimum, pollution prevention measures must be designed, installed, implemented, and maintained to:

- Minimize the discharge of pollutants from equipment and vehicle washing, wheel washwater, and other washwaters. Washwaters must be treated in a sediment basin or alternative control that provides equivalent or better treatment before discharge.
- Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to precipitation and to storm water.
- Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.

Prohibited Discharges (BPT)

The following discharges are prohibited:

- Wastewater from washout of concrete, unless managed by an appropriate control.
- Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials.
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.
- Soaps or solvents used in vehicle and equipment washing.

Surface Outlets (BPT)

When discharging from basins and impoundments, use outlet structures that withdraw water from the surface, unless infeasible.

Best Available Technology Economically Achievable (BAT)

BAT effluent guidelines apply to toxic (priority) and nonconventional pollutants under the CWA. EPA has identified 65 pollutants and classes of pollutants as toxic pollutants. Of these, 126 substances have been designated as priority toxic pollutants (see 40 CFR 401.15 and 40 CFR 423, Appendix A) These guidelines are based on the best available performance of direct discharging facilities in a given category.

Beginning no later than 20 months after 1 December 2009 for construction activities that disturb 20 or more acres of land, and no later than 4 years and 2 months after 1 December 2009 for construction activities that disturb 10 or more acres of land, the average turbidity of any discharge for any day must not exceed 280 nephelometric turbidity units (NTUs). However, if storm water discharges occur as a result of a storm event that is larger than the local 2-year, 24-hour storm, the effluent limitation listed above does not apply for that day.

Monitoring should be consistent with requirements established and specified by the permitting authority. BAT limitations for erosion and sediment controls, soil stabilization, dewatering, pollution prevention measures, prohibited discharges, and surface outlets are all covered under BPT control measures listed above.

Effluent Limitations Based on Best Conventional Pollutant Control Technology (BCT)

The 1977 CWA Amendments require EPA to identify effluent reduction levels for conventional pollutants. This technology class replaced BAT guidelines for conventional pollutants. The factors used to establish these limitations are the same as for BAT, with consideration for the different pollutant type. BCT requirements are equivalent to the BPT requirements for erosion and sediment controls, soil stabilization, dewatering, pollution prevention measures, prohibited discharges, and surface outlets.

New Source Performance Standards (NSPS)

Because new sources do not incur the expense of retrofitting existing measures, new sources are required to install the best and most efficient production processes and treatment technologies before beginning operation. These limitations are based on the best available demonstrated control technology for all pollutants. Any new source must achieve NSPS equivalent to the BAT requirements for turbidity, as well as the BPT requirements for erosion and sediment controls, soil stabilization, dewatering, pollution prevention measures, prohibited discharges, and surface outlets.

Potential Impacts to NASA

NASA will be required to meet these regulations for certain construction projects, which could result in increased project costs for implementing the construction permits and complying with the discharge limits.